

## Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

**Inorganic Contaminants**, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

**Radioactive Contaminants**, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

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Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o consúltalo con alguien que lo entienda bien.

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# Annual WATER QUALITY REPORT

Reporting Year 2013

*Presented By*



SUTTER COMMUNITY  
SERVICES DISTRICT

## Maintaining High Standards

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

We encourage you to share your thoughts with us on the information contained in this report. Should you have any questions please call Geni Goetzinger, General Manager, or Chief Operator Steven Thompson at (530) 755-1733.

## Where Does My Water Come From?

Our drinking water supply is provided entirely by groundwater. Groundwater is rain and snow that soaks through the ground and continues to move downward through pore (small openings) space in the soil until it reaches the aquifer under the city. The District operates three groundwater wells and a 750,000-gallon storage tank. We serve more than 1,055 homes, schools, and businesses. Future plans include adding another water storage tank.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

**Potent Germicide Reduction** in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

**Taste and Odor Reduction** of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

**Biological Growth Elimination** of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

**Chemical Removal** of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

## Water Conservation - California Drought

California remains in a desperate situation in regards to water for agriculture and water reserves for Public Health and Safety. Water is a critical part of California's way of life. Our economy, our environment and our day-to-day lifestyle need water to flourish. But our water supply is limited. We can help make the most of it using water wisely every day.

- Landscape watering should be done before 9:00 am and after 6:00 pm
- You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

We have more tips at the District office.



## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	PHG (MCLG) (MRDLG)	Well 1 AMOUNT DETECTED	Well 1 RANGE LOW-HIGH	Well 3 AMOUNT DETECTED	Well 3 RANGE LOW-HIGH	Well 2-B AMOUNT DETECTED	Well 2-B RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic <sup>1</sup> (ppb)	2011	10	0.004 <sup>1</sup>	7.6	NA	9	NA	10	NA	No	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (ppb)	2008	1,000	2,000	198	NA	141	NA	100 <sup>2</sup>	NA <sup>3</sup>	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chlorine (ppm)	2010	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	1	NA	1	NA	1 <sup>1</sup>	NA <sup>1</sup>	No	Drinking water disinfectant added for treatment
Fecal coliform and <i>E. coli</i> [Total Coliform Rule] (# positive samples)	2013	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive			(0)	ND	NA	NA	NA	No	Human and animal fecal waste
Fluoride (ppm)	2008	2.0	1	0.24	NA	0.3 <sup>4</sup>	NA <sup>4</sup>	0.3 <sup>2</sup>	NA <sup>2</sup>	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2007	15	(0)	4.92	NA	2.94	NA	1.44 <sup>2</sup>	NA <sup>2</sup>	No	Erosion of natural deposits
Nitrate [as nitrate] (ppm)	2013	45	45	12	NA	2.5	NA	11	NA	No	Runoff and leaching from septic tanks and sewage; erosion of natural deposits
Total Coliform Bacteria [Total Coliform Rule] (# positive samples)	2013	No more than 1 positive monthly sample			(0)	ND	NA	ND	NA	No	Naturally present in the environment
Turbidity <sup>3</sup> (NTU)	2008	TT	NA	ND	NA	0.25	0.25-0.25	0.21 <sup>2</sup>	0.21-0.21 <sup>2</sup>	No	Soil runoff

### SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	Well 1 AMOUNT DETECTED	Well 1 RANGE LOW-HIGH	Well 3 AMOUNT DETECTED	Well 3 RANGE LOW-HIGH	Well 2-B AMOUNT DETECTED	Well 2-B RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2008	500	NS	8.22	NA	10.2	NA	12 <sup>2</sup>	NA <sup>2</sup>	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2008	15	NS	3	2.0-NS	2.0	NA	3 <sup>1</sup>	NA <sup>2</sup>	No	Naturally-occurring organic materials
Specific Conductance (µS/cm)	2011	1,600	NS	350	NA	440	NA	370	NA	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2008	500	NS	7.0	NA	24	NA	12 <sup>2</sup>	NA <sup>2</sup>	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2008	1,000	NS	280	NA	340	NA	283 <sup>2</sup>	NA <sup>2</sup>	No	Runoff/leaching from natural deposits

### UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Well 1		Well 3		Well 2-B		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Hardness (ppm)	2008	140	NA	180	NA	175 <sup>1</sup>	NA <sup>2</sup>	Erosion and leaching of natural deposits

<sup>1</sup> Although your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of

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## Community Participation

You are invited to participate in our public forum and voice your concerns or questions about your drinking water. The Board of Directors meet the first Monday of each month beginning at 6:30 pm at the District office, 1880 Acacia Avenue.

## Source Water Assessment

A Source Water Assessment Plan (SWAP) has been completed. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. The sources are considered most vulnerable to the following activities not associated with any detected contaminants:

**Well 1 & Well 2-B:** Septic systems, agricultural drainage, unauthorized dumping.

**Well 3:** Gas stations, septic systems, pesticides/fertilizer/petroleum transfer and storage.

A copy of the complete assessment may be viewed at:

California Department of Public Health	Sutter CSD
Valley District 364 Knollcrest Drive Suite 101 Redding, CA 96002	1880 Acacia Avenue Sutter, CA 95982
Reese Crenshaw, (530) 224-4861	Geri Goetzinger, (530) 755-1733

# Tip of the Tap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

### Kitchen sink and drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed up water in which bacteria (i.e., pink and black colored slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

### Faucets, screens, and aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet's screen as they could be pieces of plastic from the hot water heater's dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet's gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

### Water filtration/treatment devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time so regular filter replacement is important. (Remember to replace your refrigerator filters!)

## Definitions

<sup>3</sup>Sampled in 2012.  
<sup>4</sup>Sampled in 2010.  
<sup>5</sup>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

**AL (Regulatory Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):**

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**P/G/L (picocuries per liter):** A measure of radioactivity.

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG (Public Health Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.